BIBLIOGRAPHICAL RECORD.

(*Continued from page* 96.)

The date of publication, here given in brackets [ ], marks the time at which the work was received by the Editor, unless an earlier date of publication is known to him. An asterisk * before a title is the Recorder's certificate of accuracy of quotation. Corrections of errors and notices of omissions are solicited. — B. Pickman Mann.

*[1] 867. The **Sci. Amer.** [see Rec., nos. 861–865], v. 37, contains the following.

a. The seventeen year locusts (by H. J. Loomis), p. 9. *b.* Enemy of the potato beetle [figures *Arma spinosa*, which devours *Doryphora decemlineata*] (by F. A. Whitney), p. 36–37. *c.* The lantern fly [figures *Fulgora laternaria*], p. 55. *d.* The seventeen year locust (by R. K. Slosson), p. 68. *e.* The mole cricket [imago figured], p. 71–72. *f.* Bees and hives (by Mrs. L. E. Cotton), p. 148. *g.* The locusts in Kansas (by C. V. Riley), p. 164. *h.* A satisfactory grasshopper machine [invention of C. V. Riley], p. 169. *i.* How to prevent grasshopper raids, p. 183. *j.* The Colorado potato-beetle in Europe. — German thoroughness (by C. V. Riley), p. 198. *k.* About some insects [figures imago of *Alaus oculatus*, *Cicindela dorsalis*, *Calosoma scrutator*, and development of *Cicada pruinosa* from the pupa] (by C. Few Seiss), p. 215. *l.* Curious proclivities of insects [abstract of a lecture by J. Lubbock on the destruction of the beautiful and the hideous plants], p. 244. *m.* Russian remedy for hydrophobia [larva of *Cetonia aurata*], p. 257. *n.* The potato bug in Germany, p. 273. *o.* Are ants civilized?, p. 313. *p.* The ancestry of insects [extract from Packard's "Our common insects"], p. 329. *q.* Vitality of ants (from Proc. Acad. Nat. Sci. Philad., by H. C. McCook), p. 338. *r.* The proboscis and lancets of the stable fly [figure of the proboscis of ? Stomoxys] (by J. Michels), p. 344. *s.* The curious life history of our blister beetles [figures all stages of Meloe and Sitaris; but the figures of Sitaris are marked Meloe and *vice versa;* corrected on p. 404] (by C. V. Riley), p. 346. *t.* How scorpions sting, p. 357. *u.* The Carolina Mantis [figures *Mantis carolina*] (by C. Few Seiss), p. 359. *v.* Testing wool by entomological knowledge [from the insects it contains], p. 362. *w.* The curious life history of our blister beetles, no. 2 [figures *Caloptenus differentialis*, *Epicauta vittata*, all stages of Epicauta, and *Macrobasis unicolor*] (by C. V. Riley), p. 373.

The **Bulletins de l'Academie Royale des Sciences, des Lettres et des Beaux-Arts de Belgique**, sér. 2, t. 36 (a. 1873), contain nos. 868 and 869.

* 868. Edm. de Selys Longchamps. Appendice aux troisièmes Additions et liste des Gomphines, décrites dans le Synopsis et ses trois Additions. p. 492–531. [Jan., 1874.]

Gives a table of the classification, comprising 2 divisions, 3 subdivisions, 5 legions, 12 genera, 46 subgenera, and a list of the 200 species of Gom-

[1] Record made by Mr. George Dimmock.

phina, with indication of the ordinal numeros under which the species are described in the Synopsis or its three Additions. Intercalates "11 new subgenera," of which Allopetalia alone is indicated as new. Gives a partial synopsis of the 20 subgenera of Gomphus. Describes 21 (13 [*Ophiogomphus bison* from Cal., *Gomphoides suasa* and *G. pacifica* from Mex., *G. ambigua* from Guatemala = 4 N. A.] new) spp.; re-describes *Dromogomphus armatus* ♂.

* 869. Edm. de Selys Longchamps. Appendice aux troisièmes Additions au Synopsis des Caloptérygines. p. 610–619. [Mar., 1874.]

Describes 14 (7 [no N. A.] new) spp.; re-describes *Hetaerina titia* ♂ from the probable type specimen, and *H. capitalis* ; describes *H. occisa* var. *sublimbata* n. var. Corrects the general list of species given previously.

The **Bull. Acad. Roy. Belg.,** sér. 2, t. 37 (a. 1874), contain no. 870; t. 38 (a. 1875), t. 39 (a. 1875), t. 40 (a. 1875), contain nothing on N. A. entomology.

* 870. Edm. de Selys Longchamps. Additions au Synopsis des Cordulines. p. 16–34. [Mar., 1874.]

Treats of 23 species, of which 5 are North American; *Epitheca nasalis*, *Macromia magnifica* = 2 n. N. A. spp. ; *Macromia cingulata*, hitherto considered North American, is from the region of Bengal.

The **Annals and Mag. Nat. Hist.** [see Rec., nos. 609–619], ser. 4, v. 18, contain nos. 871 to 874.

* 871. Fel. Plateau. Note on the phenomena of digestion in the cockroach (Periplaneta americana). p. 355–356. [Oct., 1876.]

Abstract of the results of a study of these phenomena, confirming the conclusions arrived at in his Recherches sur les phénomènes de la digestion chez les insectes in the Mémoires de l'Académie Royale de Belgique, v. 41 (a. 1874) (a summary of which was given in the Annals and Mag. Nat. Hist., v. 16 [a. 1875], p. 152) and maintaining that the digestive juices of insects are never acid, in opposition to the views expressed by Jousset de Bellesme in his Recherches expérimentales sur la digestion des insectes et en particulier de la blatte (Paris, 1875. 8°) (an abstract of which was reproduced under the title : On the function of the glands of the digestive apparatus of insects in the Annals and Mag. Nat. Hist., v. 17 [a. 1876], p. 333) and in subsequent discussions. A claim of priority over Jousset's work was made by Plateau in the Comptes rendus, v. 82 (a. 1876), p. 340. [From the Bull. de l'Acad. Roy. de Belgique, v. 41, p. 1206.]

* 872. Fel. Plateau. Researches on the phenomena of digestion and on the structure of the digestive apparatus in the Belgian myriopods. p. 437–438. [Nov., 1876.]

Abstract, by the author, of a paper published by him in the Mém. de l'Acad. des Sciences de Belgique, v. 42 (a. 1876).

* 873. Ja. Wood-Mason. On the femoral brushes of the Mantidæ and their function. p. 438–439 [Nov., 1876], p. 507 [Dec., 1876].

Brushes of stiff hairs were found near the distal end of each of the fore femora in numerous species of 29 genera and probably occur throughout the whole group; they are used to keep the eyes and ocelli in a functional condition, and are present in the young when these quit the egg. [Prof. Wood-Mason says, l. c., v. 19, p. 269, that these brushes were previously mentioned by Stål, although no suggestion was made as to their possible use.]

* 874. Ed. Brandt. Anatomical and morphological researches on the nervous system of hymenopterous insects. p. 504–506. [Dec., 1876.]

O. Bütschli and A. Kowalewski have proved that the embryos have seventeen ganglia — one supræsophageal, three subœsophageal, three thoracic, ten abdominal; the three subœsophageal unite to form one in the larva; the last three abdominal form the last one in the larva; the larvæ of Hymenoptera therefore have thirteen ganglia, while the larvæ of Lepidoptera have twelve. The adult Hymenoptera have the two cephalic, two or three thoracic and from three to seven abdominal ganglia. The article states the number and composition of the ganglia in the respective genera and sexes. [From the Comptes rendus, Sept. 18, 1876, p. 613.]

The **Annals and Mag. Nat. Hist.**, ser. 4, v. 19, contain nos. 875 to 879.

* 875. W. C. Hewitson. Descriptions of twenty-five new species of Hesperidæ. p. 76–85. [Jan., 1877.]

Describes 25 (*H. luda*, *H. fidicula*, *H. egla*, *H. midia* from Costa Rica = 4 N. A.) new species of Hesperia; four species are from parts unknown.

* ——— Joly. On the reproductive apparatus of the Ephemeridæ. p. 193–195. Feb., 1877.]

Describes the structure of the testes and penises of Baëtis and of the ovaries of Palingenia.

* ——— Megnin. On the power possessed by certain mites, with or without mouths, of living without food through entire phases of their existence or even during their whole lives. p. 270–271. [Mar., 1877.]

The Ixodes found attached to animals are always fecundated females, to which the male adheres by a copulatory lip; they are oviparous and prolific; the larvæ live on the food which is enveloped in their bodies while they are yet in the egg, and the males never take food. The mouthless

Acarina, like Hypopus, Homopus, Trichodactylus and Astoma, are nymphs, and take no food in the nymphal stage, but the imagos are very voracious. [From the Comptes rendus, Nov. 20, 1876, p. 993.]

* 878. Fel. Plateau. Note on the phenomena of digestion and on the structure of the digestive apparatus in the Phalangida. p. 272–274. [Mar., 1877.]

The Araneida are sucking animals ; the Phalangida eat their prey: the arrangements of the digestive tube of the two are compared. The organ hitherto called the liver in decapod Crustacea and in Araneida is present in Phalangida, and is the organ of secretion of the digestive liquid intended for the emulsion of the fats and for the solution of the albuminoids.

* 879. Ja. Wood-Mason. On the final stage in the development of the organs of flight in the homomorphic Insecta. p. 380–382. [May, 1877.]

The wings, other than the small flattened duplicatures of the integument which form the " sheath " are not developed in Orthoptera until after the penultimate moult; then they grow rapidly, becoming closely packed in transverse and longitudinal plaits.

The **Annals and Mag. Nat. Hist.**, ser. 4, v. 20, contain nos. 880 to 884.

* 880. O. P. Cambridge. On some new and little-known spiders from the Arctic Regions. p. 273–285, pl. 8. [Oct., 1877.]

Enumerates 13 species ; describes 7 n. spp., of which 3 (*Dictyna borealis* (fig.), *Erigone whymperi* (fig.), *Linyphia turbatrix*) are from North Greenland.

* 881. W. C. Hewitson. Descriptions of twenty-three new species of Hesperidæ from his own collection. p. 319–328. [Oct., 1877.]

Describes 23 (*Cyclopides eryonas* from Costa Rica and *C. dardaris* from Mexico = 2 N. A.) n. spp.; six species are from parts unknown.

* 882. ——— Jousset de Bellesme. Phenomena accompanying the metamorphosis of *Libellula depressa*. p. 447. [Nov., 1877.]

When the imago quits the pupa-skin the function of respiration is not yet set up; the imago distends its digestive tube by swallowing air, forcing the blood into the head, eyes and wings and by it giving their form to these parts and depositing the pigments which color them. [From the Comptes rendus, Aug. 20, 1877, p. 448.]

Nos. 43–44 were issued April 12, 1878.